

# Photometric Test Report



## ECLFWVW PRL10

High quality Variable White LED ellipsoidal,  
with linear CCT 2.700K – 5.600K

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## TESTING PROCESS

Prolights has its own optical testing laboratory in order to provide accurate photometric reports for its lighting products. The testing laboratory contains certain variety of precise lighting measurement systems that ensure an optimal reading of all the characteristic parameters of the lighting devices. All measurements are made at a controlled room temperature of 20°C without any external light sources. This photometric report is obtained through the data measured by a high precision measurement system and analyzed by a dedicate software.

### Prolights measurement instrument

Prolights measurement instrument is a complete measurement system for any light source. It's equipped with two-axis goniometer, that enables to measure the full 3D distribution field of the light source. This instrument measures the light intensity, the beam angle and the most significative colors parameters, like color temperature, spectral distribution, CRI, CQS, TM-30 with a very high accuracy rate.

**Please Note:** All measurements are made with light source at operating temperature. Before starting the measurement, the instrument analyzes the process of the light source during the heating phase. The measuring process of all the parameters begins only when the light emission is stable, that is with a variation of less than 0.5% in a 15 minutes time frame.

### Prolights measurement software

The software provides user friendly interface for the operator who does the measurements, and it also analyzes and processes all the collected data by the instrument. With this software it is possible to see the measured data in real-time and it is possible to examine all the measured data and graphics afterwards as well. All information is collected in a specific Prolights template, and the software creates also IES and LDT files, which are widely used to transfer the photometric data, and to develop lighting system.

Additionally, the fixtures are rechecked using various hand-held instruments like Sekonic C-700 and Gossen Mavospec Base, this is done to ensure, that the data in the photometric report are as accurate as possible.



Total lumen output:

7494 lm

Peak candela output:

378137 cd

Light quality:

CRI: 94,7

Color temperature:

3993 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL10

Target:

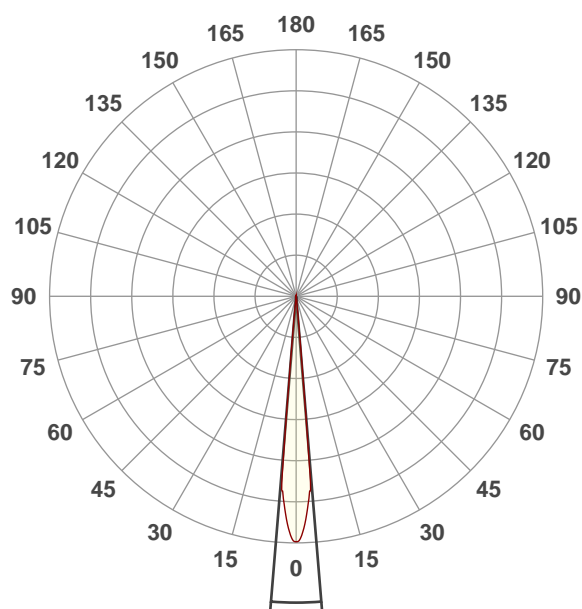
Full On

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:18:21

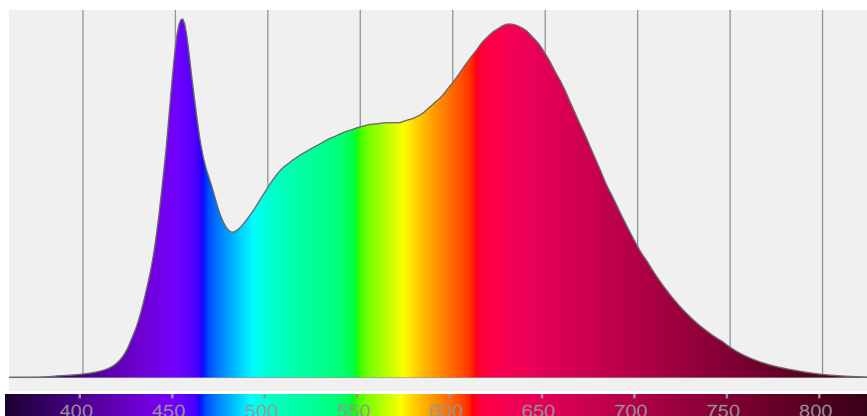


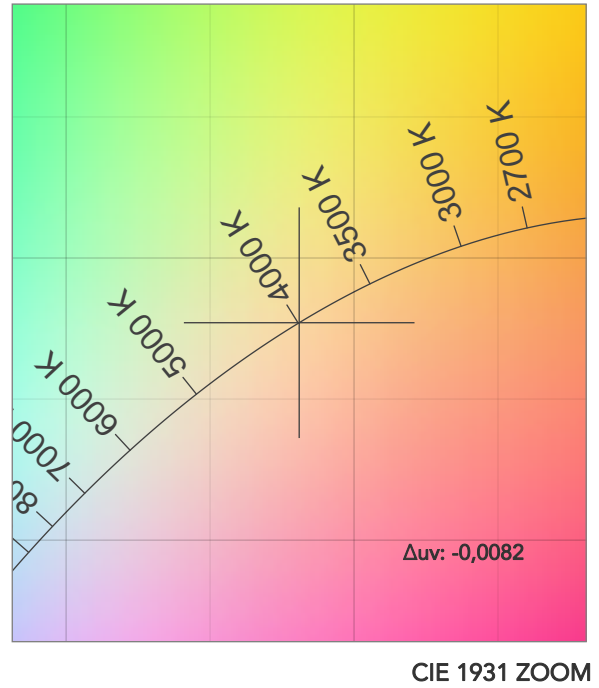
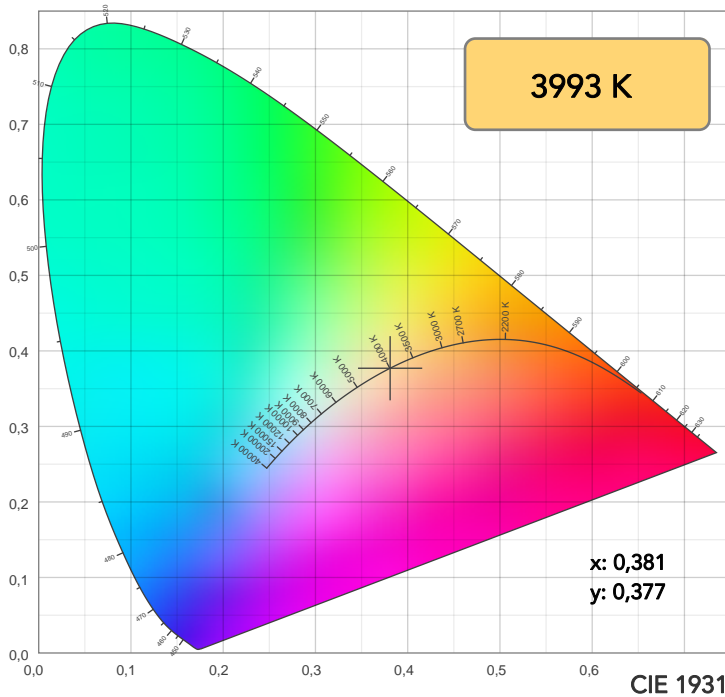
Beam angle 50%: 9,4°

Field angle 10%: 10,7°

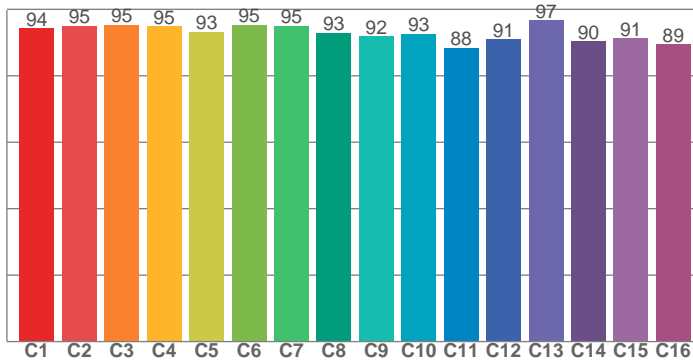
Cut off angle 2.5%: 11,1°

Spectra

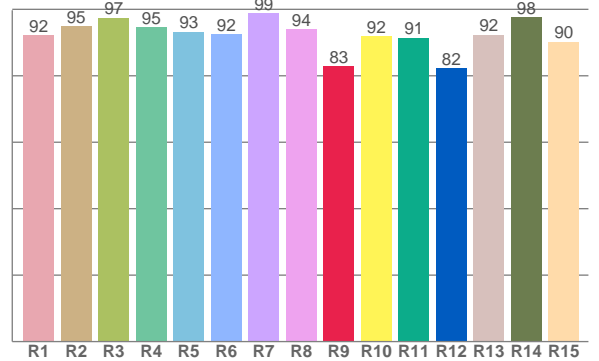




TM30: 93,0



CRI: 94,7 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
92,3	94,9	97,5	94,6	93,2	92,5	98,9	93,9	82,9	91,8	91,4	82,4	92,4	97,6	90,2

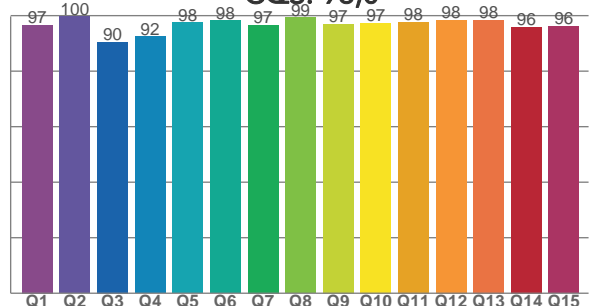
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
94,3	95,1	95,3	94,9	93,2	95,3	95,0	92,9	91,8	92,5	88,4	90,9	96,7	90,3	91,2	89,5

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
96,7	99,6	90,4	92,4	97,5	98,2	96,7	99,4	97,0	97,4	97,7	98,4	98,5	96,0	96,2

CQS: 96,0

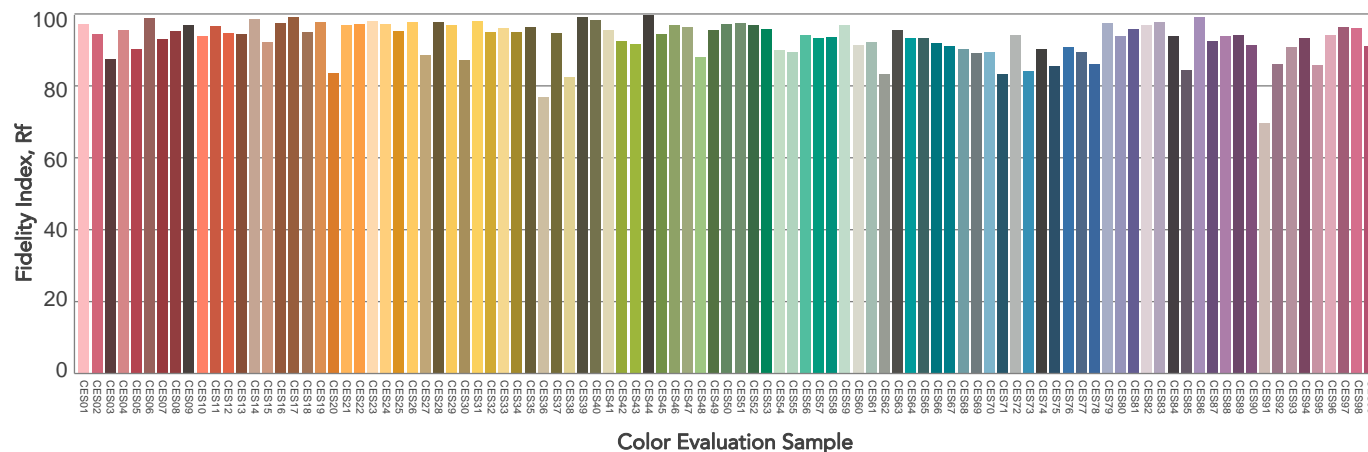
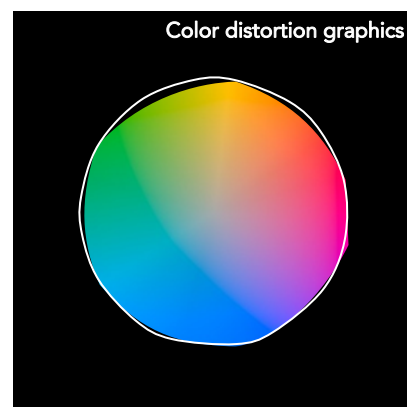
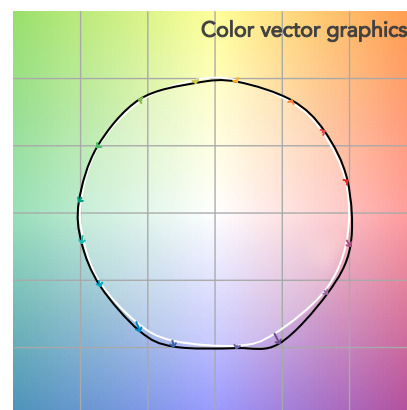
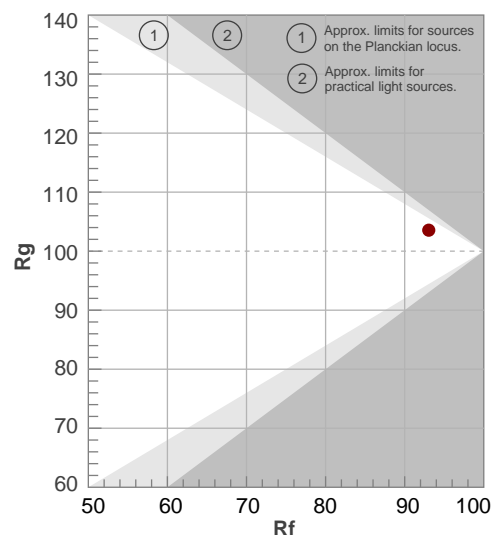


## COLOR PARAMETERS

Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
3993 K	94,7	82,9	93,0	103,6	96,0	98	0,381	0,377	-0,0082

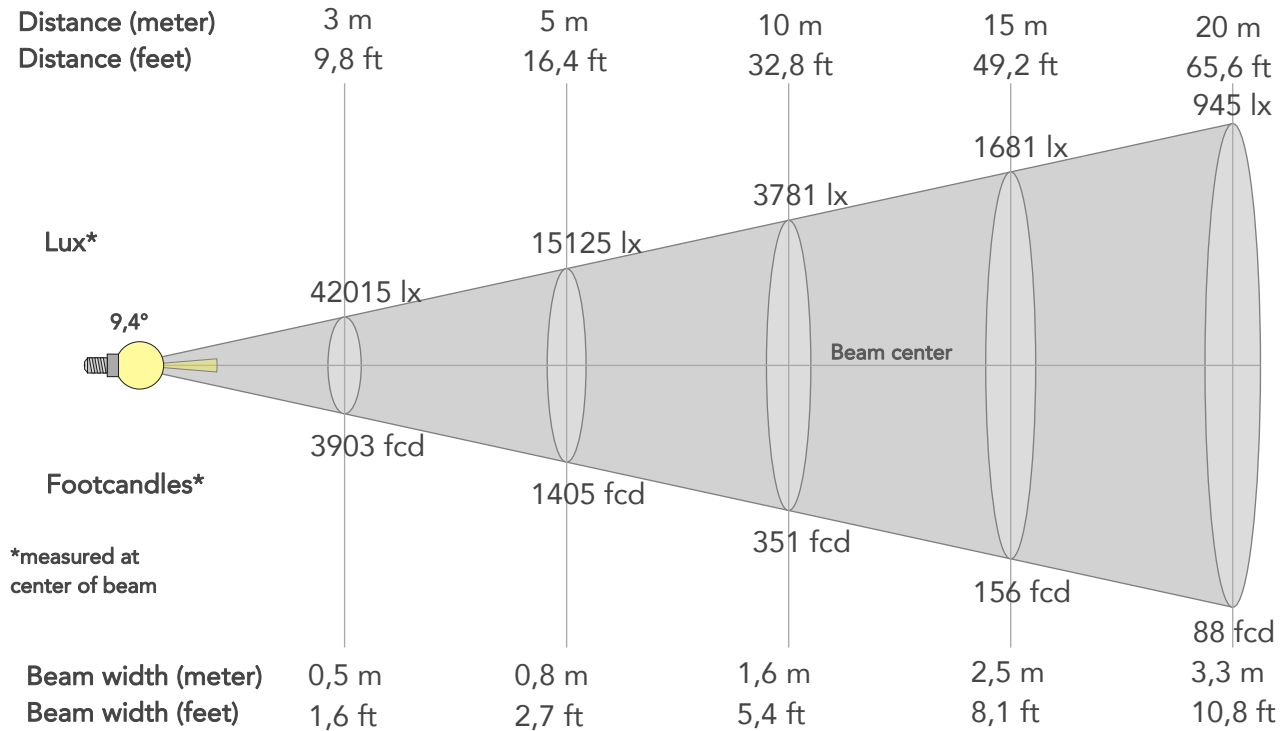
## Gammut index

		Graphic shifts (%)	
Hue Bin	$R_f$	Chroma	Hue
1	94	1%	1%
2	95	2%	0%
3	95	1%	0%
4	95	-1%	-1%
5	93	-2%	0%
6	95	1%	1%
7	95	0%	2%
8	93	1%	3%
9	92	2%	5%
10	93	1%	4%
11	88	4%	6%
12	91	4%	2%
13	97	2%	-1%
14	90	8%	-1%
15	91	3%	0%
16	89	4%	-4%



## BEAM DETAILS

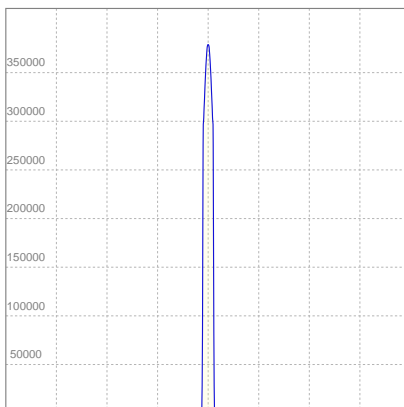
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
9,4°	10,7°	11,1°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	378137lx	94534lx	42015lx	23634lx	15125lx	6722lx	3781lx	1681lx	945lx	605lx	420lx	236lx	151lx
Footcand.	35130fcd	8783fcd	3903fcd	2196fcd	1405fcd	625fcd	351fcd	156fcd	88fcd	56fcd	39fcd	22fcd	14fcd
Beam wid.	0,2m	0,3m	0,5m	0,7m	0,8m	1,2m	1,6m	2,5m	3,3m	4,1m	4,9m	6,6m	8,2m
Beam wid.	0,5ft	1,1ft	1,6ft	2,2ft	2,7ft	4,1ft	5,4ft	8,1ft	10,8ft	13,5ft	16,2ft	21,6ft	27ft

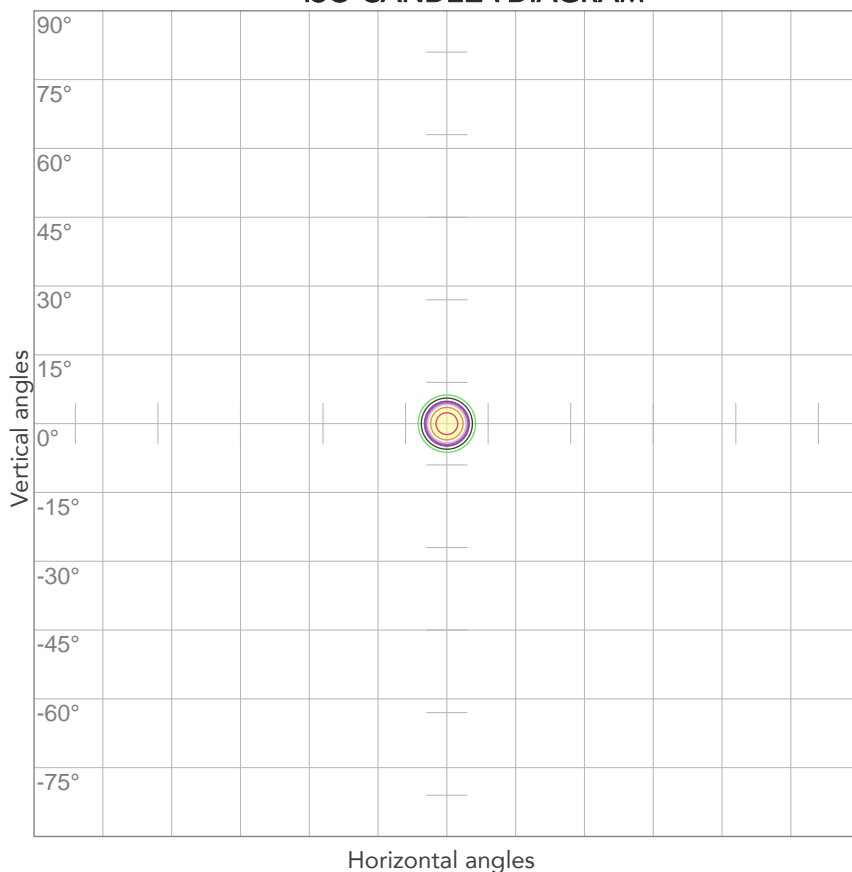
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	1,19A	260,5W	29lm/W
Power Fc			
0,97			

## ISO CANDELA DIAGRAM



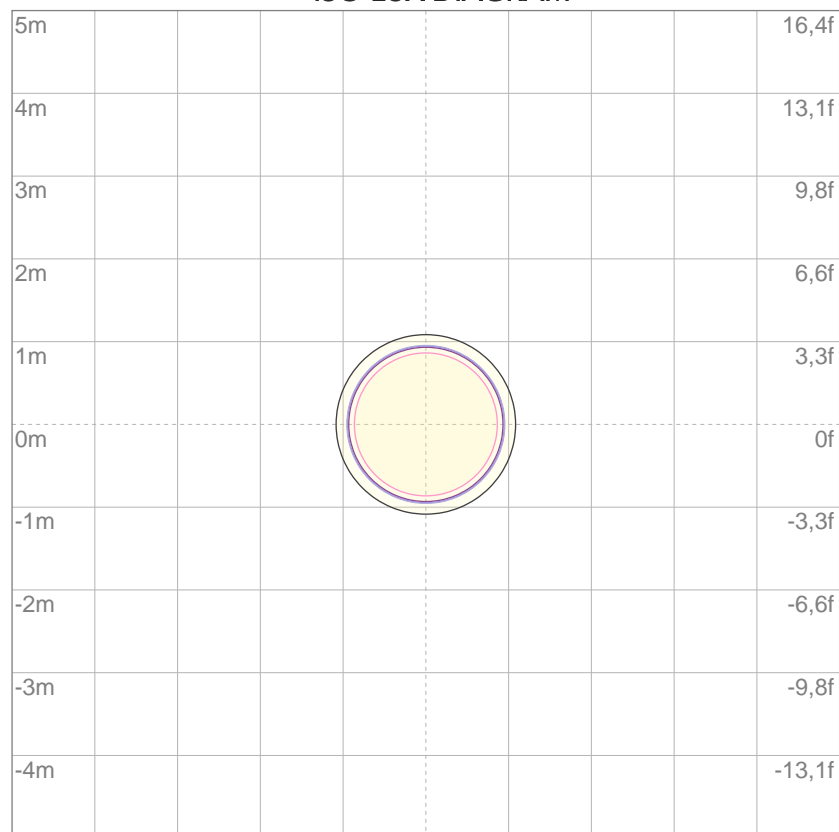
10%	37814 cd
20%	75627 cd
30%	113441 cd
40%	151255 cd
50%	189069 cd
60%	226882 cd
70%	264696 cd
80%	302510 cd

### Conditions:

Number of c-planes: 2

Candela at center: 378137 cd

## ISO LUX DIAGRAM



3%	113 lx
5%	189 lx
10%	378 lx
30%	1134 lx
50%	1891 lx

### Conditions:

Number of c-planes: 2

Lux at center: 3781 lx

*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*





Total lumen output:

4159 lm

Peak candela output:

209327 cd

Light quality:

CRI: 96,9

Color temperature:

5613 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL10

Target:

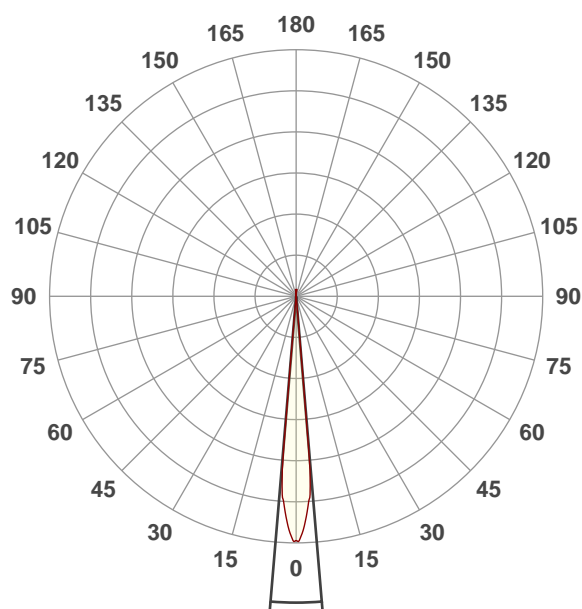
Cold White

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:23:35

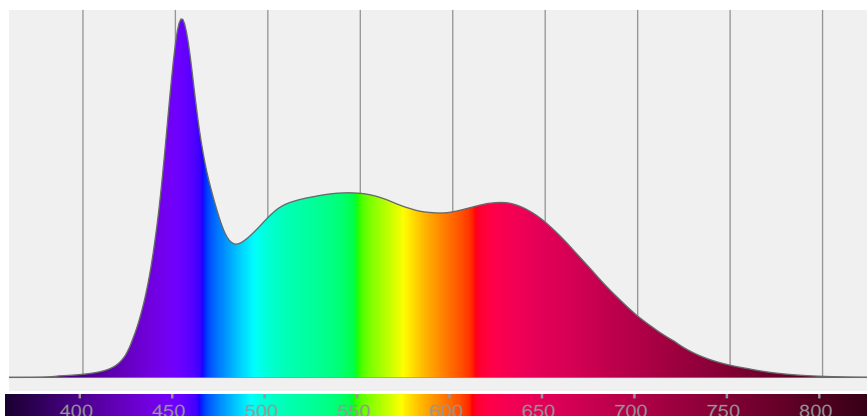


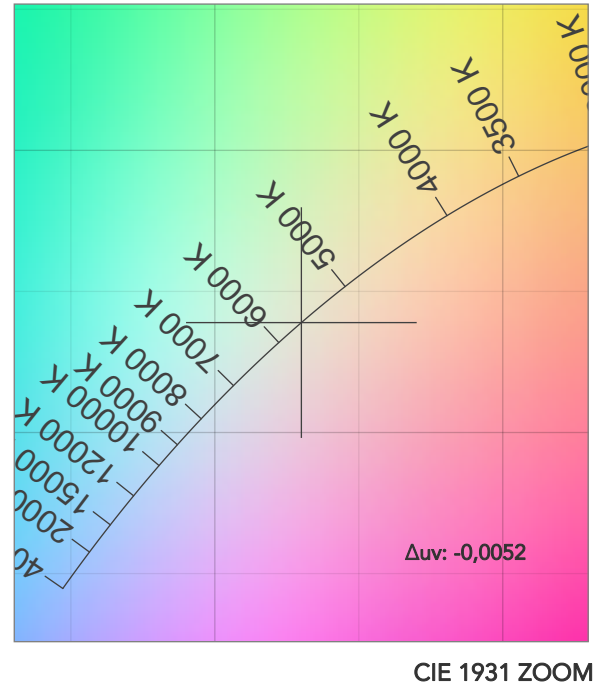
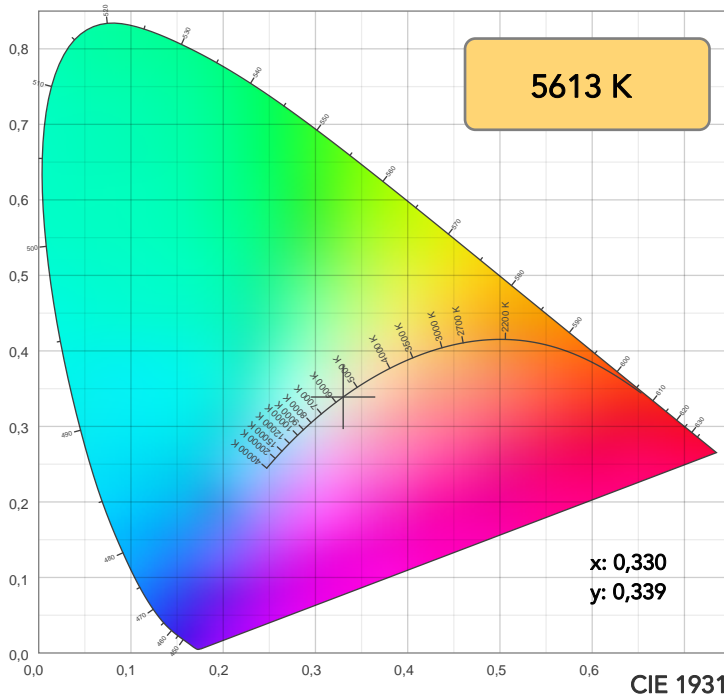
Beam angle 50%: 9,6°

Field angle 10%: 10,4°

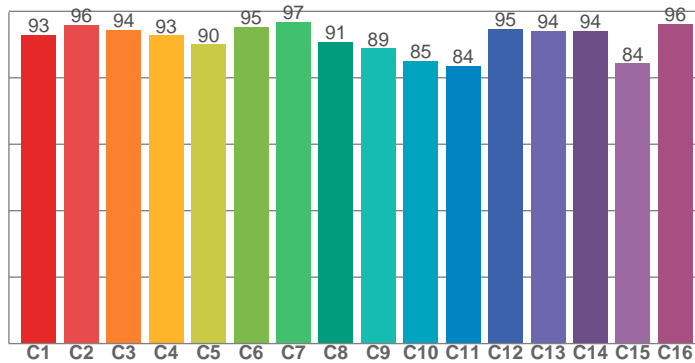
Cut off angle 2.5%: 10,8°

Spectra

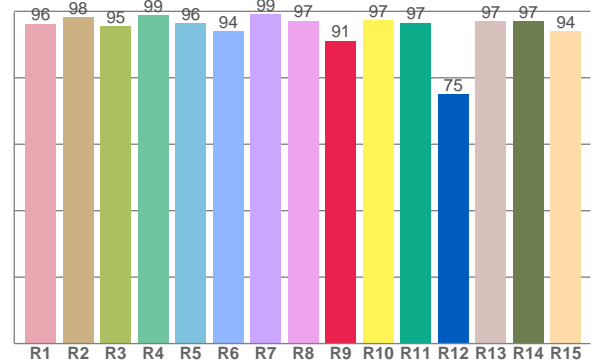




TM30: 91,5



CRI: 96,9 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
96,2	98,1	95,5	98,9	96,5	94,1	99,1	97,2	91,2	97,3	96,6	75,1	97,0	97,1	94,1

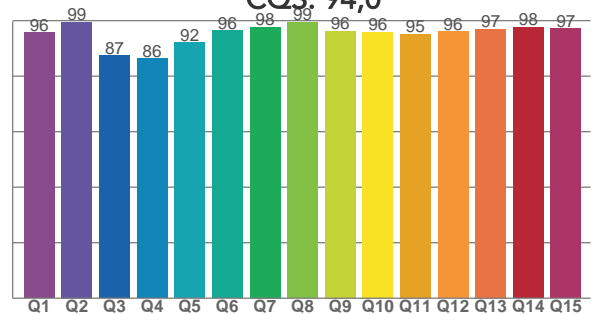
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
93,0	95,9	94,5	92,8	90,0	95,3	96,8	90,8	88,9	85,2	83,6	94,7	94,1	94,1	84,4	96,2

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95,7	99,5	87,3	86,3	92,1	96,4	97,7	99,4	96,2	95,9	95,2	96,1	97,1	97,6	97,1

CQS: 94,0



## COLOR PARAMETERS

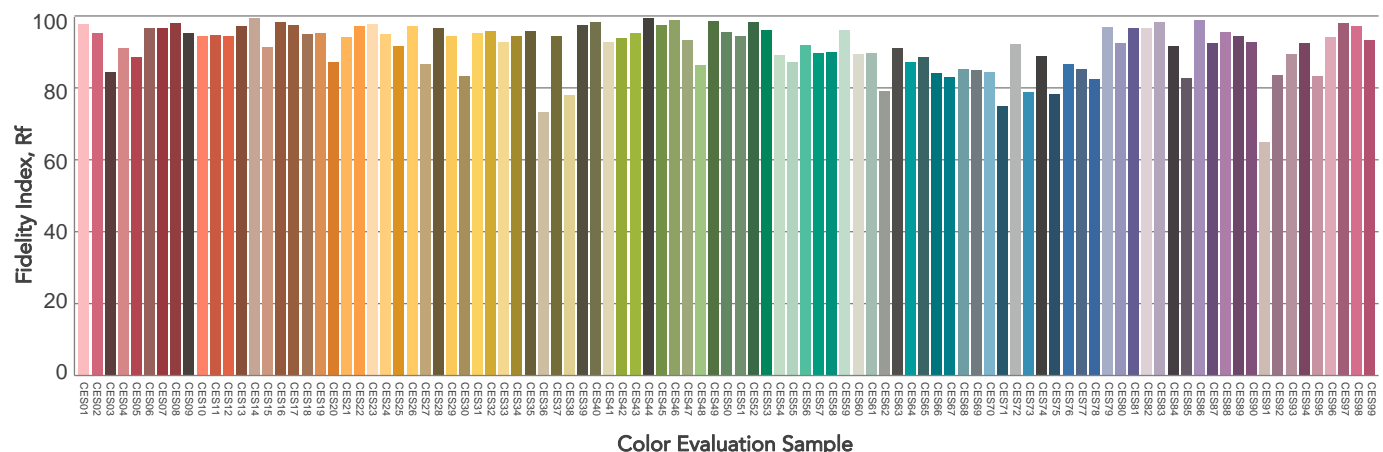
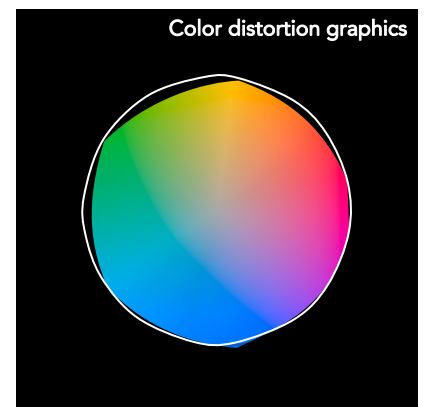
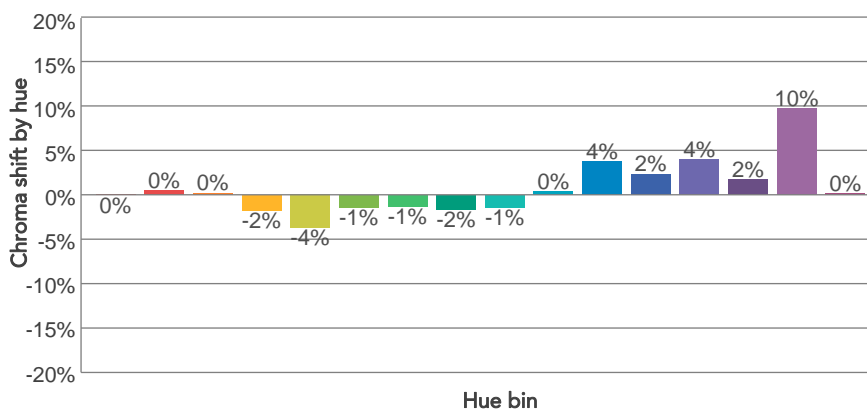
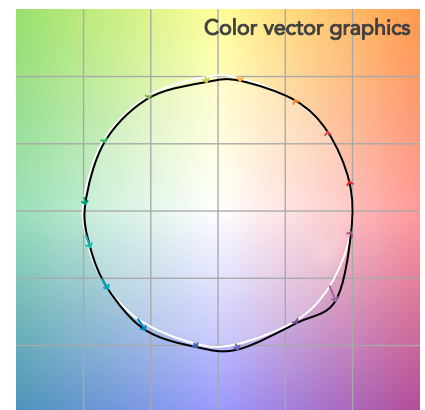
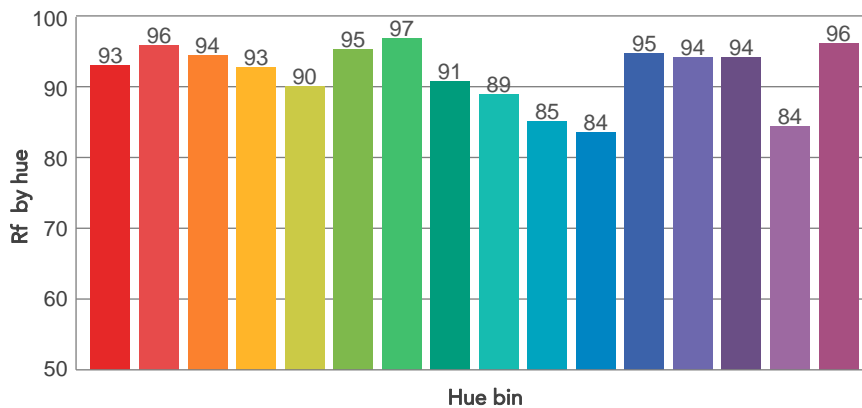
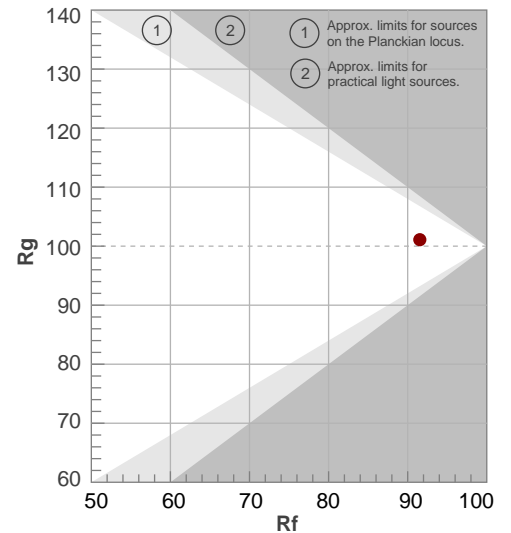
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
5613 K	96,9	91,2	91,5	101,1	94,0	98	0,330	0,339	-0,0052

# TM30 DETAILS

**Rf 91,5**  
Fidelity index Rf

**Rg 101,1**  
Gammut index

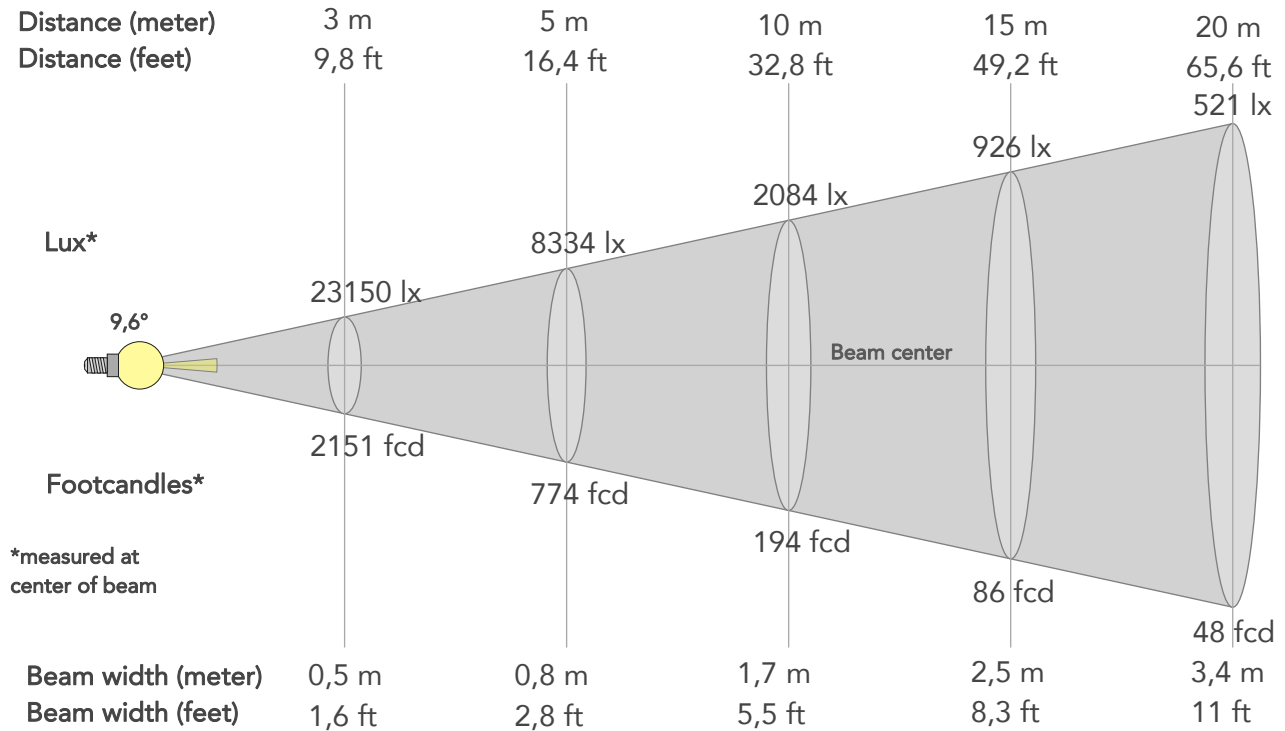
Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	93	0%	1%
2	96	0%	1%
3	94	0%	0%
4	93	-2%	0%
5	90	-4%	0%
6	95	-1%	1%
7	97	-1%	1%
8	91	-2%	5%
9	89	-1%	9%
10	85	0%	8%
11	84	4%	9%
12	95	2%	2%
13	94	4%	1%
14	94	2%	0%
15	84	10%	-7%
16	96	0%	1%



## BEAM DETAILS



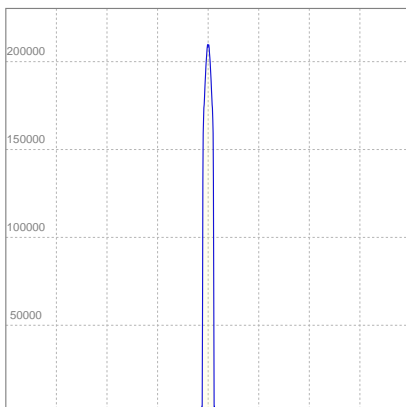
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
9,6°	10,4°	10,8°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	208351lx	52088lx	23150lx	13022lx	8334lx	3704lx	2084lx	926lx	521lx	333lx	232lx	130lx	83lx
Footcand.	19356fcd	4839fcd	2151fcd	1210fcd	774fcd	344fcd	194fcd	86fcd	48fcd	31fcd	22fcd	12fcd	8fcd
Beam wid.	0,2m	0,3m	0,5m	0,7m	0,8m	1,3m	1,7m	2,5m	3,4m	4,2m	5m	6,7m	8,4m
Beam wid.	0,6ft	1,1ft	1,6ft	2,2ft	2,8ft	4,1ft	5,5ft	8,3ft	11ft	13,8ft	16,5ft	22ft	27,5ft

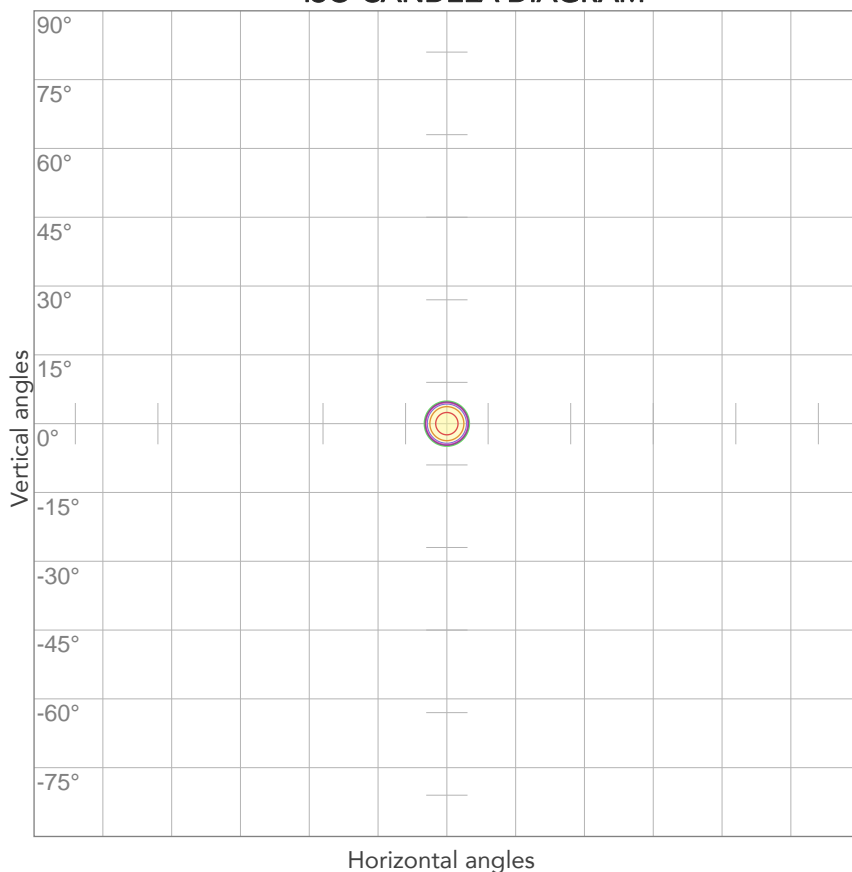
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,622A	130,6W	32lm/W
Power Fc			
0,97			

## ISO CANDELA DIAGRAM



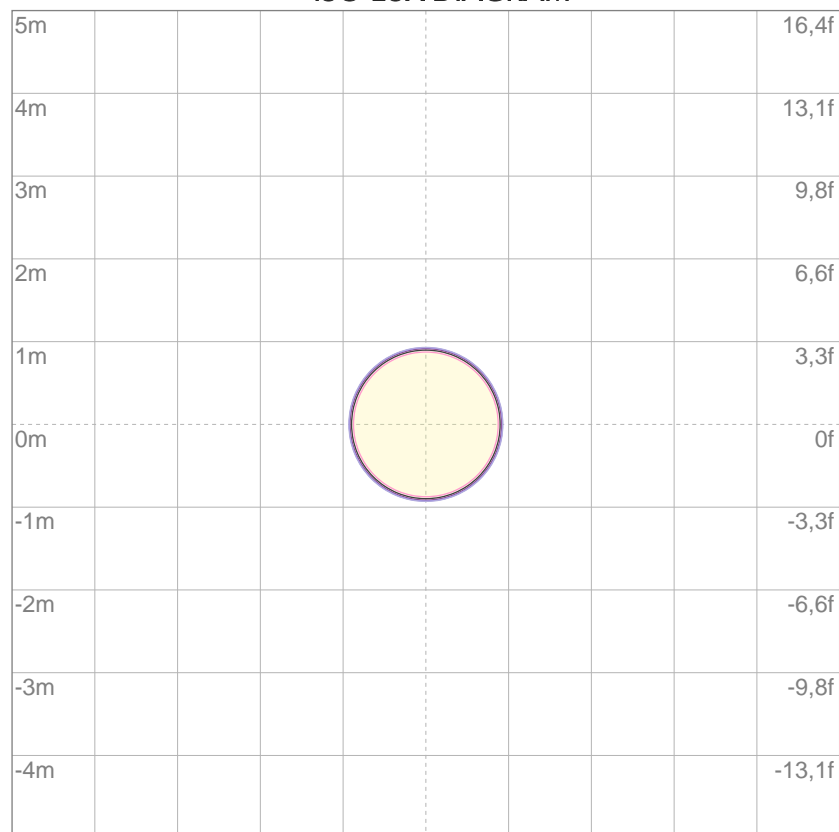
10%	20835 cd
20%	41670 cd
30%	62505 cd
40%	83341 cd
50%	104176 cd
60%	125011 cd
70%	145846 cd
80%	166681 cd

### Conditions:

Number of c-planes: 2

Candela at center: 208351 cd

## ISO LUX DIAGRAM



3%	62,5 lx
5%	104 lx
10%	208 lx
30%	625 lx
50%	1042 lx

### Conditions:

Number of c-planes: 2

Lux at center: 2084 lx

*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*



Total lumen output:

3421 lm

Peak candela output:

174788 cd

Light quality:

CRI: 96,6

Color temperature:

2706 K

PRODUCT NAME:

ECLFWWW

MEASURAMENT CONDITIONS:

Beam angle:

PRL10

Target:

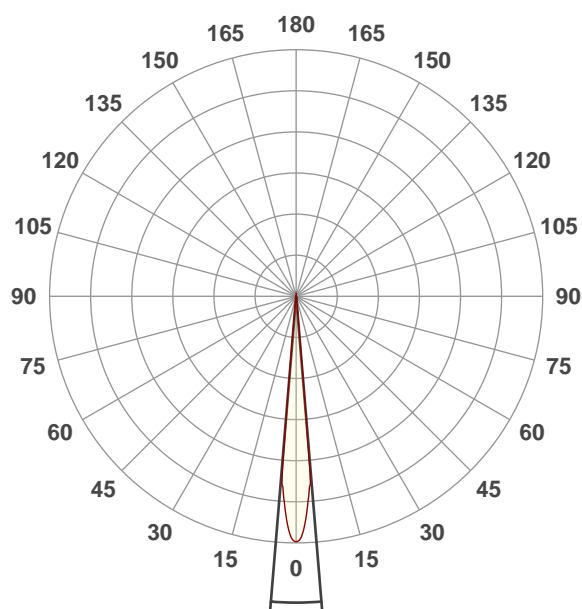
Warm White

Operator:

Paolo Carvone

Date and time:

11/06/2021 13:21:50

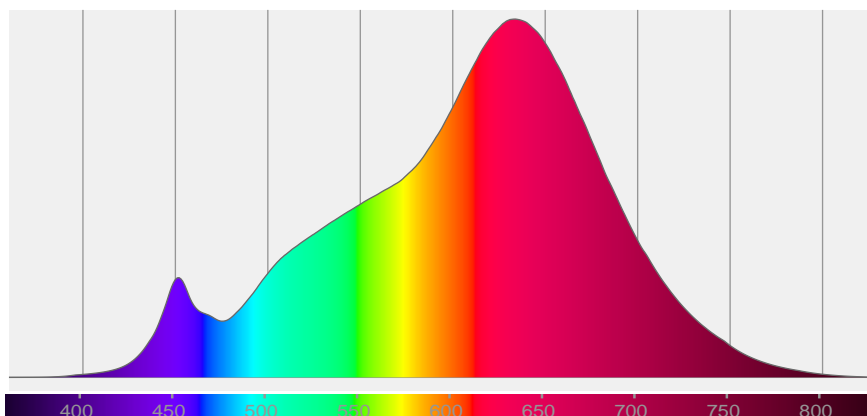


Beam angle 50%: 9,5°

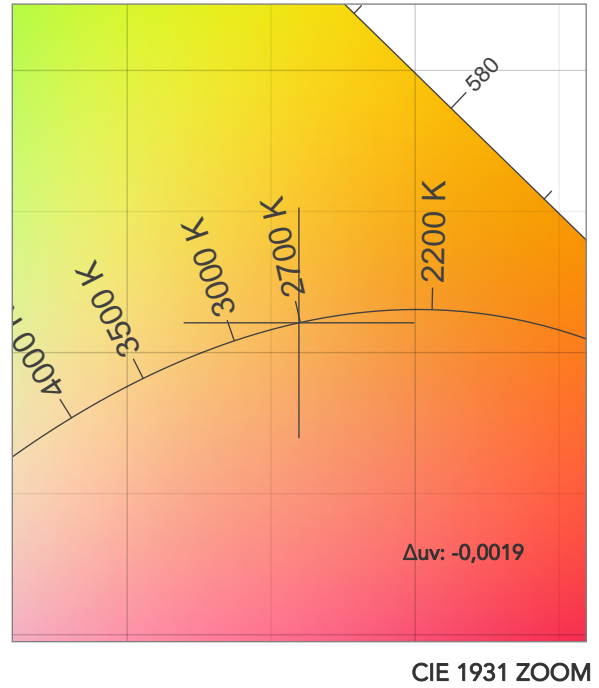
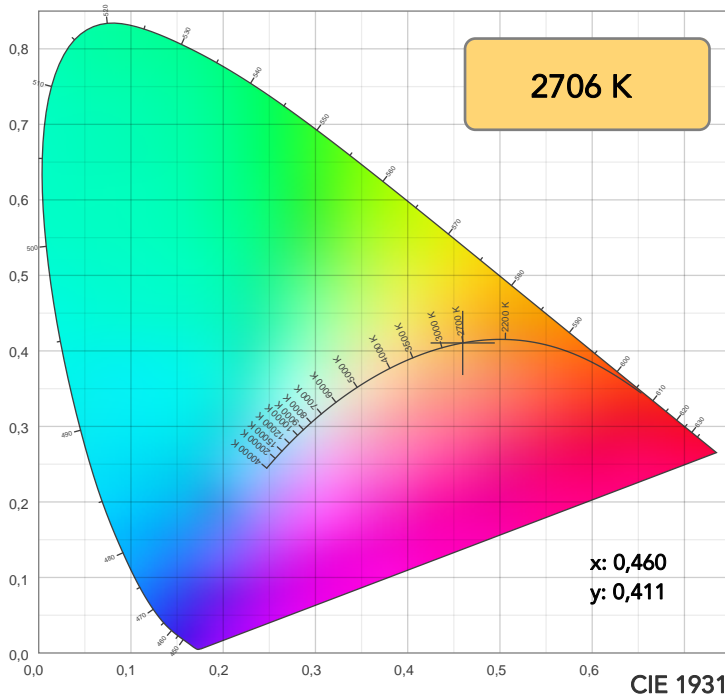
Field angle 10%: 10,4°

Cut off angle 2.5%: 11,3°

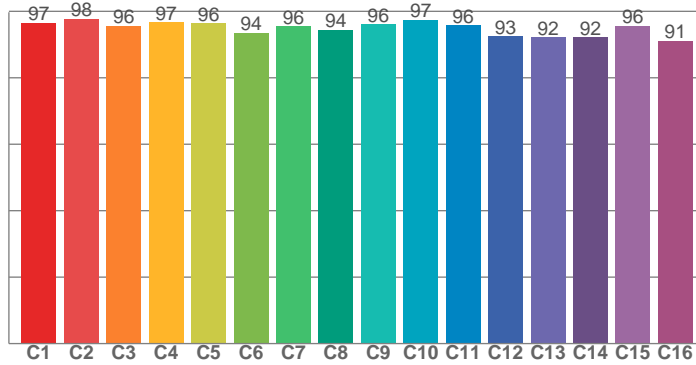
Spectra



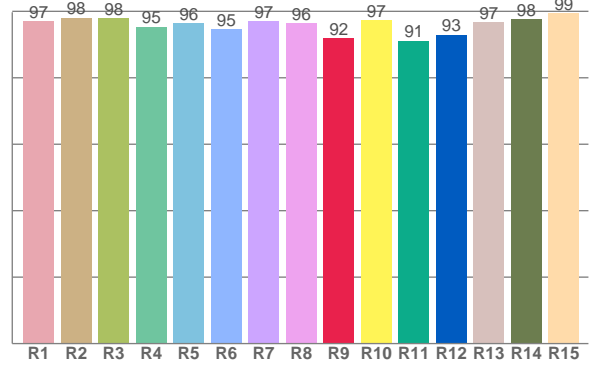
## COLOR DETAILS



TM30: 95,3



CRI: 96,6 (R1-R8)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
97,0	98,1	97,9	95,4	96,5	94,6	97,0	96,4	91,9	97,4	91,2	93,0	96,7	97,6	99,4

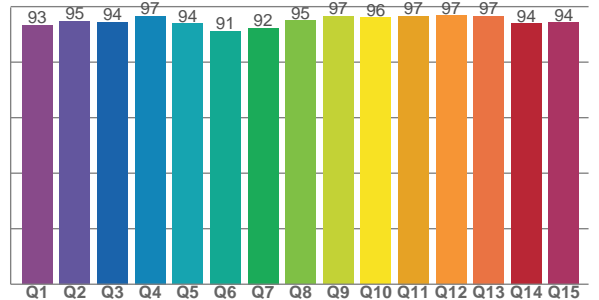
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96,5	97,7	95,7	96,7	96,4	93,5	95,5	94,4	96,1	97,4	95,8	92,5	92,2	92,2	95,7	91,1

CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
93,3	94,9	94,5	96,6	93,9	91,3	92,3	95,0	96,5	96,1	96,7	96,7	96,6	93,9	94,3

CQS: 94,3



## COLOR PARAMETERS

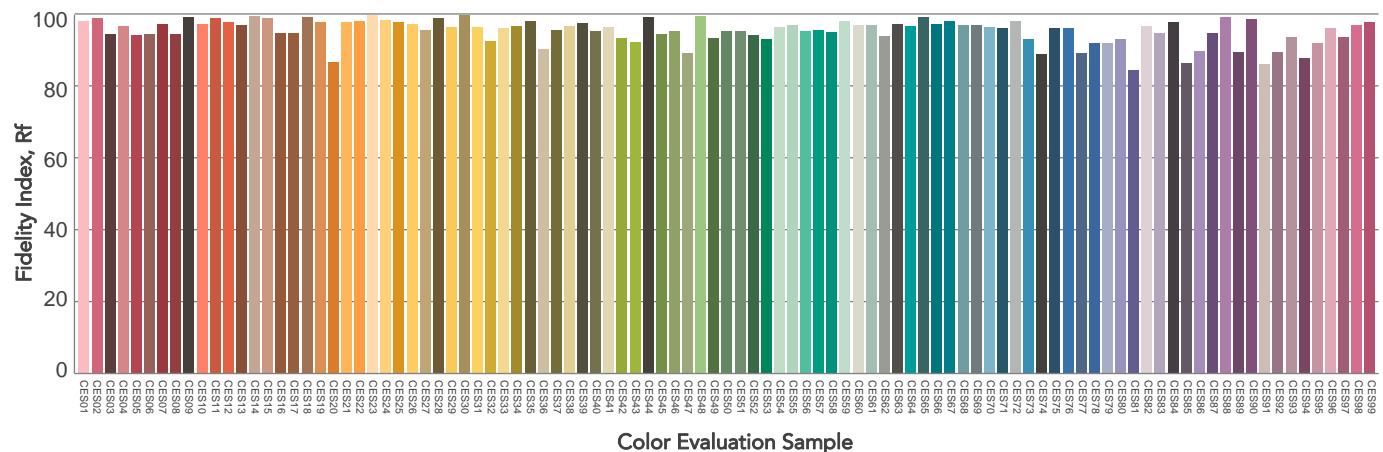
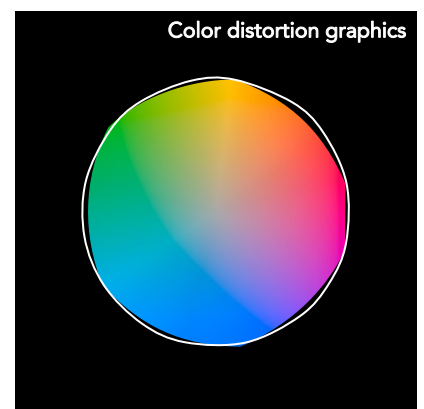
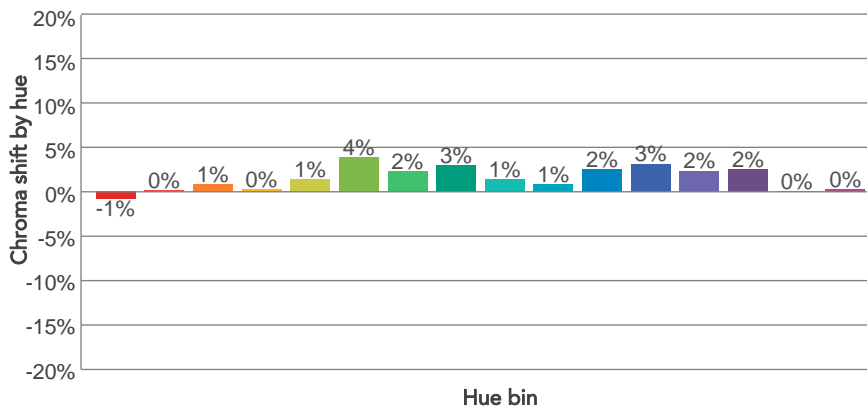
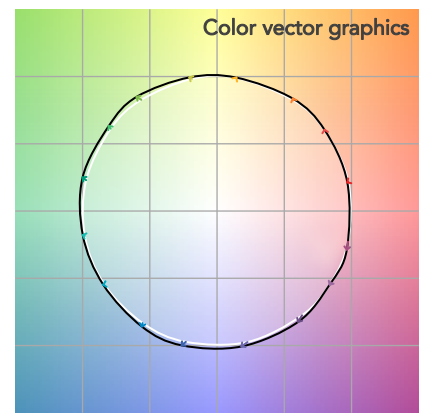
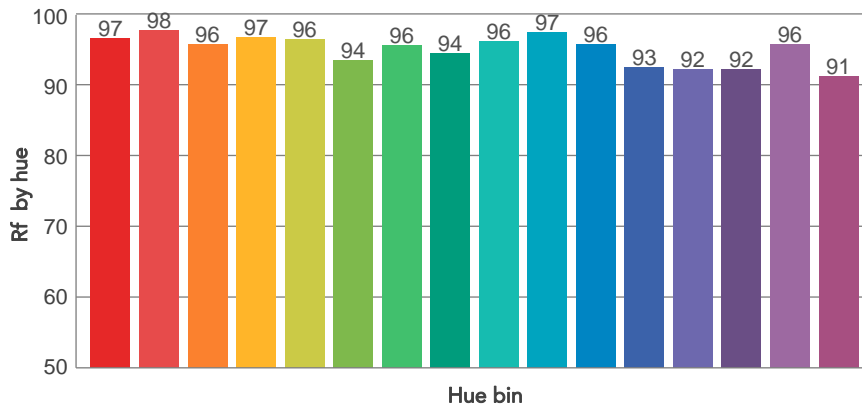
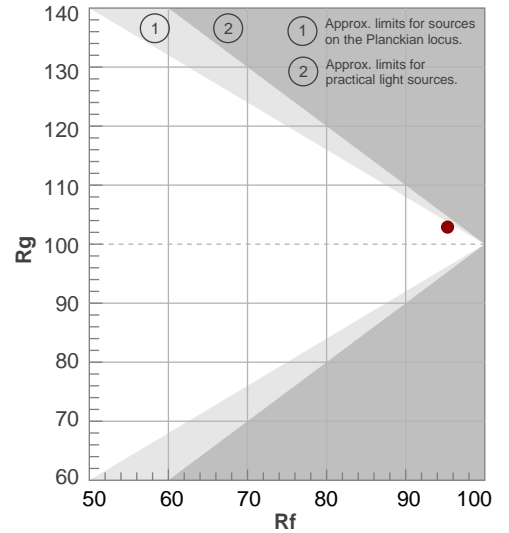
Color temperature	Color rendering index	Red component	Color fidelity	Color gamut	Color quality scale	Television lighting index	Color coordinate cie 1931	Color coordinate cie 1931	Color deviation from black body
CCT	CRI	CRI R9	TM30 Rf	TM30 Rg	CQS	TLCI	x	y	$\Delta uv$
2706 K	96,6	91,9	95,3	102,9	94,3	98	0,460	0,411	-0,0019

# TM30 DETAILS

**Rf 95,3**  
Fidelity index Rf

**Rg 102,9**  
Gammut index

Hue Bin	R <sub>f</sub>	Graphic shifts (%)	
		Chroma	Hue
1	97	-1%	0%
2	98	0%	0%
3	96	1%	1%
4	97	0%	0%
5	96	1%	2%
6	94	4%	2%
7	96	2%	-1%
8	94	3%	-1%
9	96	1%	-1%
10	97	1%	0%
11	96	2%	1%
12	93	3%	-3%
13	92	2%	-5%
14	92	2%	-5%
15	96	0%	-2%
16	91	0%	-6%

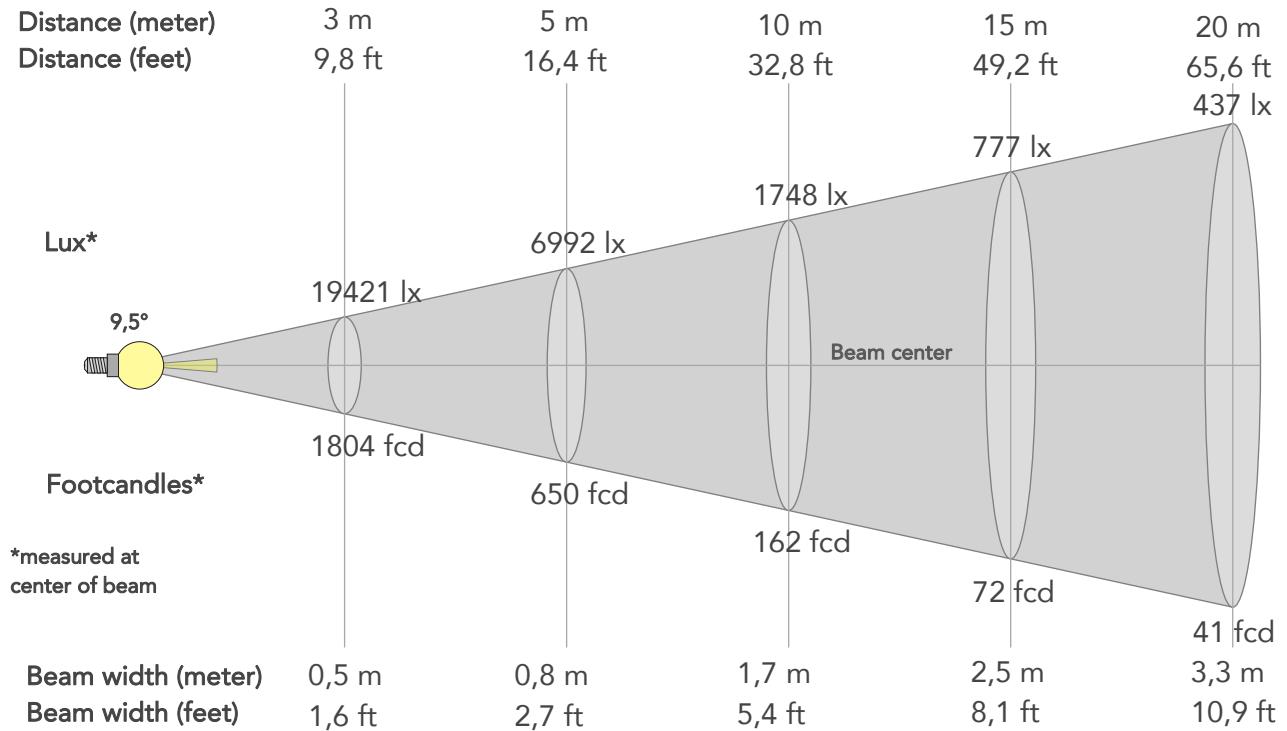




## BEAM DETAILS



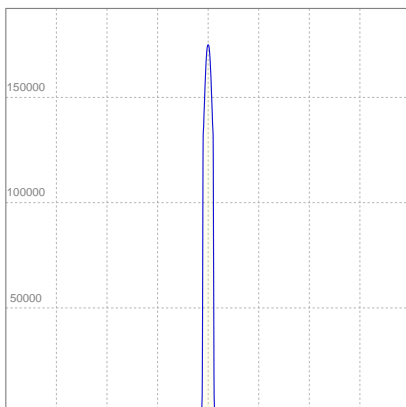
Beam angle 50%	Field angle 10%	Cut off angle 2,5%	Intensity ratio in 120° cone	Intensity ratio in 90° cone
9,5°	10,4°	11,3°	100,0%	100,0%



### BEAM INTENSITIES AND WIDTHS

Distance	1m	2m	3m	4m	5m	7,5m	10m	15m	20m	25m	30m	40m	50m
Distance	3,3ft	6,6ft	9,8ft	13,1ft	16,4ft	24,6ft	32,8ft	49,2ft	65,6ft	82ft	98,4ft	131,2ft	164ft
Lux	174788lx	43697lx	19421lx	10924lx	6992lx	3107lx	1748lx	777lx	437lx	280lx	194lx	109lx	70lx
Footcand.	16238fcd	4060fcd	1804fcd	1015fcd	650fcd	289fcd	162fcd	72fcd	41fcd	26fcd	18fcd	10fcd	6fcd
Beam wid.	0,2m	0,3m	0,5m	0,7m	0,8m	1,2m	1,7m	2,5m	3,3m	4,1m	5m	6,6m	8,3m
Beam wid.	0,5ft	1,1ft	1,6ft	2,2ft	2,7ft	4,1ft	5,4ft	8,1ft	10,9ft	13,6ft	16,3ft	21,7ft	27,2ft

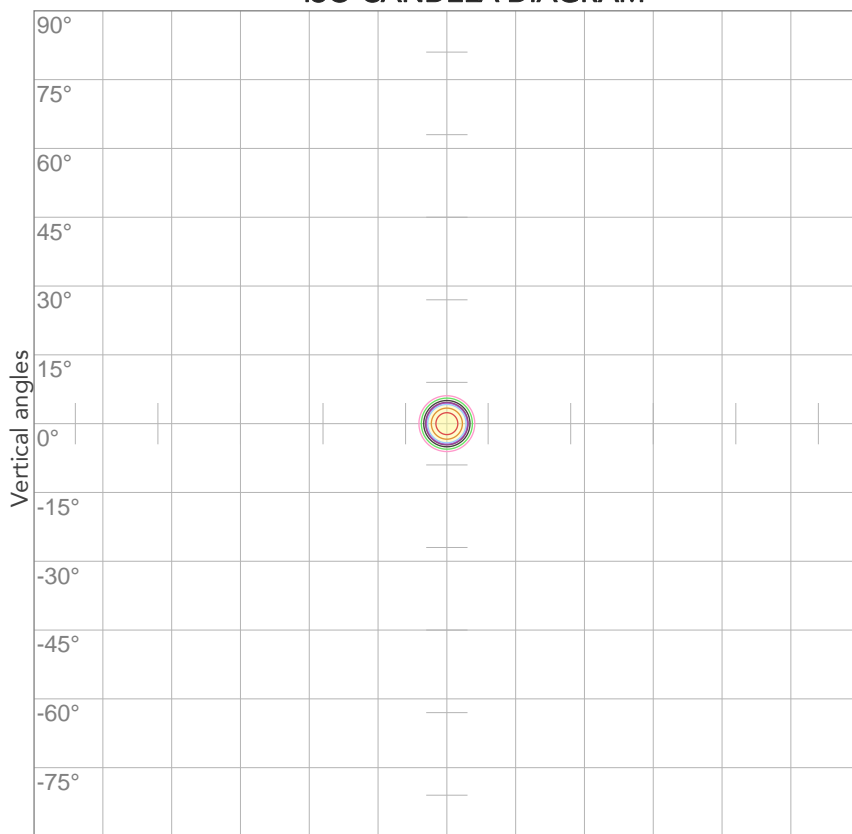
### LINEAR DISTRIBUTION DIAGRAM



### ELECTRICAL SPECIFICATIONS

Input voltage	Input current	Input power	Effeciency
226V	0,630A	132,7W	26lm/W
Power Fc			
0,97			

## ISO CANDELA DIAGRAM



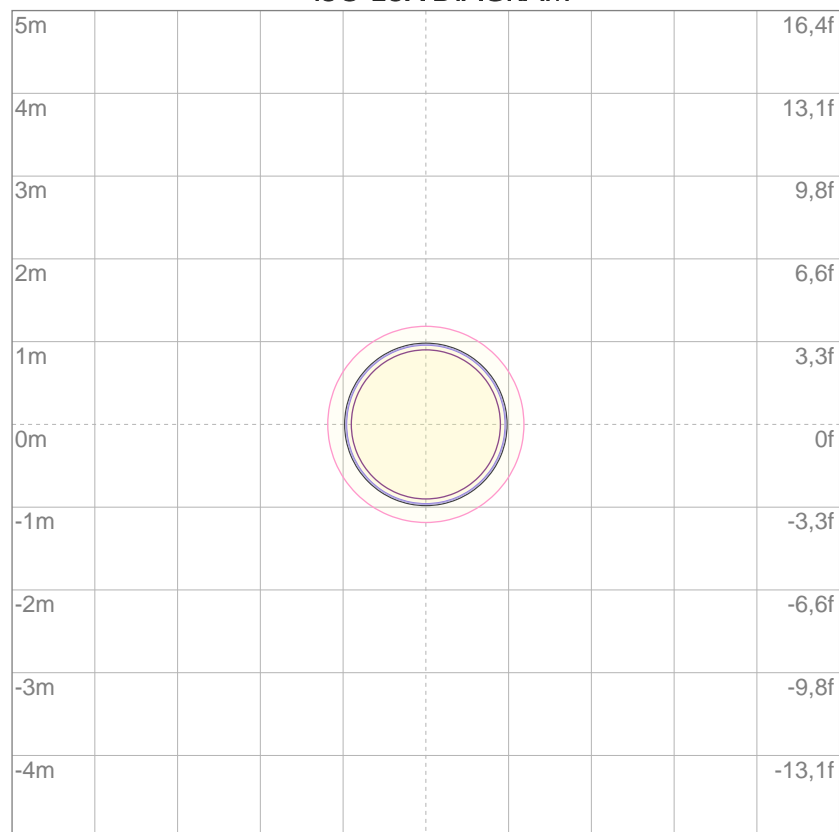
10%	17479 cd
20%	34958 cd
30%	52436 cd
40%	69915 cd
50%	87394 cd
60%	104873 cd
70%	122351 cd
80%	139830 cd

### Conditions:

Number of c-planes: 2

Candela at center: 174788 cd

## ISO LUX DIAGRAM



3%	52,4 lx
5%	87,4 lx
10%	175 lx
30%	524 lx
50%	874 lx

### Conditions:

Number of c-planes: 2

Lux at center: 1748 lx

*Lux distribution on a surface when lamp is mounted at 10 meters from the surface.*